**Consolidated comments from Africa RISING ESA team**

**General**

The ESA team finds the report informative, encouraging and guiding the approach, design and implementation of Phase II, which the reviewers strongly recommend. While many of these recommendations are great and feasible, they clearly require more resources to be brought on board.

Below are a few issues that we feel need explanation or seek more information to make the report better understood. Some of these would probably not have featured in the report if the design of the review did allow for a senior Africa RISING team member to accompany the review team during field visits in order to offer more accurate backup information as required.

**Definition of terms arising from the continued use of “free inputs” and “elite farmers”**

1. ESA biophysical scientists do not consider that there is need to use the term “free inputs” as a substitute for research inputs in a research project. **Research inputs** are applied in a research setting/trial hosted on-station or on-farm. AR research trial sites are hosted on-farm and research inputs are applied directly on the on-farm research sites. They are not free inputs for farmers to apply on to their gardens.
2. **Both “mother” and “baby” trials receive research inputs**. They are research **trials** designed to generate complementary sources of information on technologies being tested/validated. The mother trial is designed with more scientific rigour and has many more technologies and treatments; the baby trial has fewer, usually farmer selected components, for generating supplementary information on adaptability to the ecological and farmer management environments.
3. **Host farmers, especially for mother trials, are not “chosen” with the primary objective that they are elite and have a higher potential to adopt**; they are chosen because they have the resources (e.g. land) to offer to host the trials as well have time to share the knowledge gain from researchers with other farmers. Given that the trials are also community learning centers, it adds value when the farmer has the capacity to contribute to explaining to the farmer learners (farmer to farmer learning).
4. **Baby trials are self-select and, consequently, random**. It would be far-fetched to imagine that the 1600 baby trials in Malawi, for example, are all hosted by elite farmers. We appreciate that as a consequence of this randomness, the Malawi team has identified double-up legume technology designs targeting two social groups (typologies). See: https://cgspace.cgiar.org/handle/10568/72724.
5. **Any household that procures technology inputs for application on their land are adopters (**not mother or baby trials, although we can and should generate information from them). There are many types of farmers that qualify to be considered adopters.
   1. A trial host farmer who accepts to procure inputs and the trial technology on his/her farm
   2. A trial host farmer who procures inputs and the trial technology and who additionally extends the trial technology on his/her farm beyond the trial site
   3. A trial host farmer who continues with the technology after the research trial has ended, either on the same research site or beyond
   4. A host “baby” farmer who accepts to procure inputs and to be involved in the project
   5. A host “baby” farmer who accept to procure inputs and additionally supplements those that the project has offered. Again in Malawi, baby trials receive legume seed but if the host farmer procures fertiliser to add value to the seed, this farmer has adopted beyond seed.
   6. Farmers who do not host trials but are learners from the trials. If they procure inputs and apply the technology, they become adopters, sometimes also called “spillovers”.

The above ‘adopters’ are at different stages of adoption. Learning from the above different types would yield very useful lessons and recommendations for the scaling up of technologies.

We acknowledge the reviewers observation that Africa RISING has, in the main, not been following up these adopters; the main reason being that researchers have been occupied more with defining mature technologies. While this has been so, we also note that identifying and following up adopters is a major activity in the technology delivery and scaling projects, such as the AR-NAFAKA Project in Tanzania.

**Ambition versus expansion**

We note the review report recognises that we were over ambitious in phase one, but goes ahead to recommend some very major expansions. In fact, some of the limited advancements identified in the review are a result of our being ambitious. Along the way, we have appreciated that some activities will be better addressed through strengthened partnerships with institutions that handle relevant specialisations. For example, NAFAKA comes on board with its advantage on bringing the demand side (uptake and use of products) of selected value chains. They are working with millers and other buyers on the output side, as well as with agro-dealers on the input side, to build effective networks with farmers and farmers’ associations. This is our entry point for addressing **Market awareness, analysis and action.**

We would like to emphasize that partnering with other institutions to fill existing gaps is not a venture that happens without additional resources. The well-functioning partnership with NAFAKA is a prime example. While we had tried to work with NAFAKA from the beginning and even had a MoU in place, nothing happened on the ground. The partnership only became operational when USAID added funds for Africa RISING to invest in this partnership.

We would welcome suggestions from the reviewers on areas to prioritise for expansion and and those to eventually disinvest (only two minor ones are mentioned – MNLD and aflatoxin research).

**Context and basis of some of the recommendations**

There are mixed thoughts about the basis for and implications of the recommendations provided in the report (notwithstanding the details in Annex A). We highlight a few of major concerns below.

**Project start-up period.** The review identifies the slow start-up period with regards to farming systems research implementation as having been compromised by the ‘quick-wins’ initiated during year one while we were clarifying the program structure and implementation framework. However, we do not consider this period as time lost. The quick-wins contributed to partnership building and yielded results which guided planning for and implementation of year two activities (e.g. value chain analyses, seed production, technology identification and prioritization).

**Balance between crops-livestock-soils-nutrition**. We appreciate that progress in the components of SI research is at different “speeds” that the review recommendations will guide in narrowing the gaps. But we also would like to point out that some of the activities are guided by the principle of “*stepwise progress towards sustainable intensification*”, especially when they need longer implementation periods before they generate credible data, and that the balance will not be concurrent at every point of time in the project implementation period.

In ESA, we do not agree to the observation that “…beyond crop rotations and intercropping of legumes, there has been only limited concentration on soil health”. ***NRM technologies driven by ISFM*** is one of our successful research components in ESA. Agronomic surveys[[1]](#footnote-1) that identified yield gaps, key crop production constraints and defined the nutrient input and output balances of different fields helped guided the design and implementation of studies on use of synthetic fertilisers, livestock manures, BNF, cover crops and reduction of soil and water loss (ridging, ripping, fanya juus, fodder-strengthened terraces, shelter belts) all of which contribute to soil health.

**Harmonisation of trials across sites and countries.** This can be done to a limited extent (and especially if one researcher is supervising activities across sites/countries) due to different agroecologies, varying degrees of farming systems transition, and researcher capacities. We need to avoid misinterpretation of *harmonisation*. Africa RISING, argues for flexible and adaptable solutions to problems (and not be seen to promote ‘panacea’ technologies or technologies that are best under all farming conditions), but advocates for cross-learning during program learning, and project review and planning events.

**Interactions of component technologies in relation to farming systems effects.** In ESA, Research themes are identified and used as a base around which interdisciplinary research is designed. The research implementation is then interactive on, where possible, given action sites, by a number of researchers from different disciplines and institutions. There are many examples of component technologies being implemented together in ESA, including vegetable x poultry (Babati and Kongwa in Tanzania), crop variety x soil health x cattle feed (Babati), soil health x product safety – aflatoxins (Babati), and crop variety x soil health on sites in all ESA countries. Where research activities are not conducted/integrated on same fields, and especially those that are covered in overlapping periods, separate calculations and modeling will be used to add them together.

**Building membership, momentum and ownership for R4D Platforms (highlighted box p. 43).**

Before setting up the Babati District R4D Platform in April 2014, we had a consultant to carry out a stakeholder mapping and assess their potential contributions to and benefits from the planned R4D platform. This included the private sector and NGOs operating in the District. All relevant stakeholders had been contacted and the establishment of the R4D Platform discussed. Having not been able to get the buy-in from some stakeholders is indeed a missed opportunity. This might develop over time when they see better the benefits of an active participation. The Platform is still at an early stage.

**Sub-optimal trial intensity and research quality in Tanzania.** Because the metric for trial intensity is not given, and given that research quality appears to be judged based on technical reports, we also consider that the observations are not based on actual facts. There are more “mother trials” in Tanzania than in Malawi for example, even when they are far and wide apart. Tanzania probably has the most diverse component activities.

ESA scientists have considered that reporting on single season data does not present real statistical/science rigor. Where research studies and trials are complete, they should be published and presented in reports as publications. The first peer reviewed publications of Africa RISING came from Tanzania, one of which has already hit the category of “most downloaded article” in the journal it was published[[2]](#footnote-2). A number of papers are in the publication pipeline and 39 abstracts have been submitted in advance of manuscripts that are going to be presented for internal review at the ESA Phase I Legacy writeshop at the end of June. This is ESA’s internal arrangement of ensuring publication of our outputs.

The evaluators recommend more focused research on post-harvest issues but the report is silent about the extensive work that is already carried out in Tanzania. This might be due to the fact that the visiting period of the reviewers fell into a period of the year when no post-harvest activities are occurring. Also the efforts by The World Vegetable Center to better integrate vegetable production in the farming systems to improve household and poultry nutrition, and household income are not mentioned.

**Implementation of research by national partners.** National partners are seconded to Africa RISING by their institutions; we consider that the institutions are aware of the other responsibilities and workload of their employees. So, we do not agree with the conclusion that “National partners in Tanzania have other responsibilities and cannot be expected to spend the time needed in the research action sites”.

Secondly, partnership with national partners is a buy-in to Africa RISING and for local institutional capacity building and sustainability. The Babati District Council started including research and its outputs on the Council agenda as a result of our engagement with their staff. Thirdly, in a situation where we have to reach and install many trials and demonstrations in a given planting window, for example, it is necessary to train local personnel (government, and development partners) to use protocols to install research trials, especially at baby trial level. These partners are usually given hands-on training at the mother trials. All this is capacity development; they are better equipped with what to extend! Extension should not be divorced from research. We appreciate, however, that the reviewers have noted that the national partners have performed well.

**Tanzania (and Mali) has not invested in a critical mass in site coordination employed by the CGIAR Center that is responsible for the Africa RISING country project.** First, we do not understand why one theme each is identified out of 6 in Babati and out of 3 in Kongwa/Kiteto about leader presence. The crop management theme in Babati has a resident graduate research assistant in place employed by CIAT; likewise the livestock theme (ILRI???) whose leader is not resident. ICRISAT has deployed a NRS based in Dodoma to supervise/coordinate activities for the Kongwa/Kiteto site; Babati site has had one for some time, employed by IITA. These staff were present during the review period. All the above staffs are CGIAR staffs. We do not consider that these positions have to be filled only by IRS, and we are not aware that the quality of research being supervised by the nationals has been compromised. Additionally, CGIAR institutions are limited in their options to place IRS in certain locations because availability of international schools and good medical care are lacking.

Our research management and implementation in ESA is decentralized; sub-contracted partner institutions lead activities and report to the Chief Scientist. We do not employ and deploy IITA scientists, as the main contractor, to play this role.

**Large numbers of scientists that only allocate small amounts of their time to Africa RISING and sub-subcontracted partnerships are effective mostly in raising transactions costs and diluting programmatic resources**. The full-time equivalents in the documents do not really reflect the actual time input. Most scientists invest more time than is documented in the proposals. It will likely be difficult to enforce the recommended “…*minimum 20 percent full-time equivalent commitment*” for staff who pay allegiance to their mother institutions. We also do not consider the amount of time present in the field as the sole criterion for a scientist’s contribution to Africa RISING. The quality of the research and the contributions to project and program level discussions are of great importance.

We consider that the return to investment is high in the present arrangement. Consider that annual thematic activities are supported, on average, by about $150,000. If we were to employ an IRS per theme, almost 80% of this support would be on their salary and benefits, with limited funds remaining for operations. It would not work for a vast country like Tanzania. We also know and appreciate that some partners have pooled support from other projects to build on each other’s progress.

**Adding homestead farming systems focus to ensure profound women involvement.** We appreciate the potential importance of homestead activities and need to plan them better for scientific rigor, in our new R-in-D paradigm. The evaluators’ assumption that an integrated homestead farming system focus will ensure that women are more profoundly involved in Phase 2 may not always hold true. If women themselves express the wish to be given opportunities mainly in this area, we will address this. However, if we focus on homestead farming only for women, we will be limiting them to activities that are culturally regarded as typical “female” activities. Shouldn't we offer women a wide range of opportunities? Africa RISING’s gender research found out that in Ghana, newly introduced maize in main fields outside the homestead farming was an extremely important crop for women. Since maize is not regarded as a "male crop", some of them were finally in the position to produce a staple crop.

Given the breadth of activities that contribute to SI at the household and landscape levels, there is an over-emphasis on the homestead in the review document.

**Collaboration with specialized partners and programs, such USAID’s Modernizing Extension and Advisory Services project, which partners with the University of Illinois in Malawi, and other areas of expertise.** Africa RISING is already collaborating with this SANESA project in Malawi, through MSU. The Africa RISING PI leads a four year subcontract from University of Illinois, responsible to support the strengthening of research-extension linkages. This project is fully collaborating with Africa RISING in Malawi, Malawi Extension Services and the faculty in extension at Lilongwe University of Agriculture and Natural Resources. This is a concrete example where Africa RISING and partners are proactively engaging to support research in development through working with the Modernizing Extension and Advisory Services project mentioned in the report.

**Research into Maize Lethal Necrosis and aflatoxin should be considered for divestment.** These two research areas were issues emerging during implementation of Phase 1 (e.g. the outbreak of MLN in neighbouring Kenya and it devastating effects in 2012), and considered worth addressing should we be serious about sustainable intensification of farming systems and improving nutrition of farm households.

While we are working to finding solutions to enhance productivity of the maize based smallholder farming system where stress resilient and high yielding crop varieties are a basic resource, the emergence of MLN was a potential threat to using current high yielding maize varieties in the sense that most of these maize varieties on the market are susceptible. If good varieties are among the key drivers to achieving a more productive and resilient/sustainable smallholder farming system, it is justified to have on-farm research that tackles emerging challenges in the project sites such as MLN. Intensive research is already being done in crop/maize improvement programs at various institutions in the region which is still mainly on-station. The on-farm MLN research in Babati is unique because it provides the opportunity to draw conclusions based on research results coming from trials conducted under natural disease conditions. With a lot of progress made already the future focus of Africa RISING will dwell more on how to make available to farmers those varieties with promising tolerance.

Heavy mycotoxin contamination of staple foods such as maize and groundnut in the ESA project countries is major impediment to improve nutrition based on these two ingredients. Africa RISING’s focus was on determination of hotspots and the level of contamination and awareness creation. Complementary research by other IITA led projects is done to come up with pre-harvest biological control products to reduce to a large extent the contamination. ICRISAT’s findings in the Eastern Province of Zambia on cultural field practices which reduce infestations that begin in the field can be promoted across the other countries.

In addition, two of the most important objectives of postharvest management work are to reduce food contamination and improve food safety. Hence, research on postharvest management would be incomplete without considering Aflatoxin issues, especially in maize and groundnuts.

1. Kihara et al, 2014 Nutr Cycl Agroecosyst: DOI 10.1007/s10705-014-9648-3

   Tamene et al, 2015. Nutr Cycl Agroecosyst DOI 10.1007/s10705-015-9692-7 [↑](#footnote-ref-1)
2. Abass et al. 2014. Journal of Stored Products Research 57:49–57. [↑](#footnote-ref-2)